

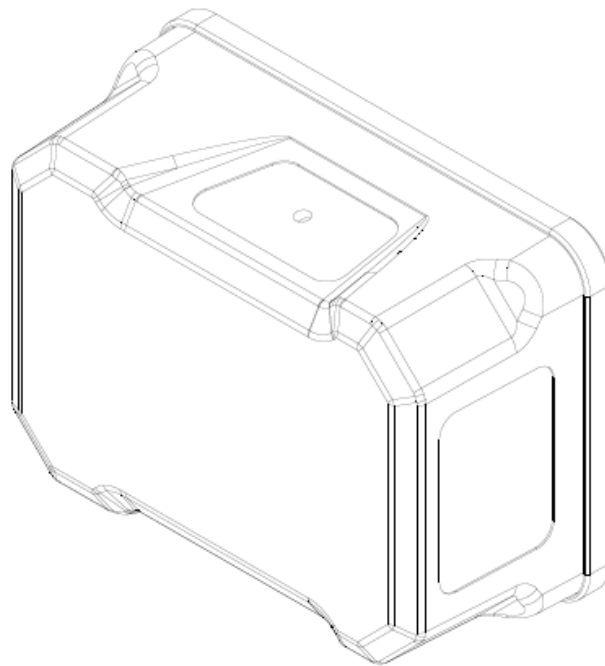
# TECHNICAL DATASHEET

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## VS1

10067 Vibration sensor powered by energy harvester



<b>SPECIFICATION</b> .....	<b>3</b>
Power supply:.....	3
Vibration required for continuous operation:.....	3
Power consumption:.....	3
Enclosure material:.....	3
Ingress protection:.....	3
Typical weight w. pot magnets:.....	4
Dimensions: (excluding mounting accessories.).....	4
Dimensions: (w. pot magnets.).....	4
Operating Temperature:.....	4
Storage Temperature:.....	4
Relative humidity:.....	4
Mounting interface:.....	4
Radio communication:.....	4
Acceleration measurements:.....	5
Temperature sensor measurement accuracy:.....	5
Edge data storage:.....	5
Timesynchronization offset:.....	5
Expected product lifetime:.....	5
<b>CONTACT</b> .....	<b>5</b>

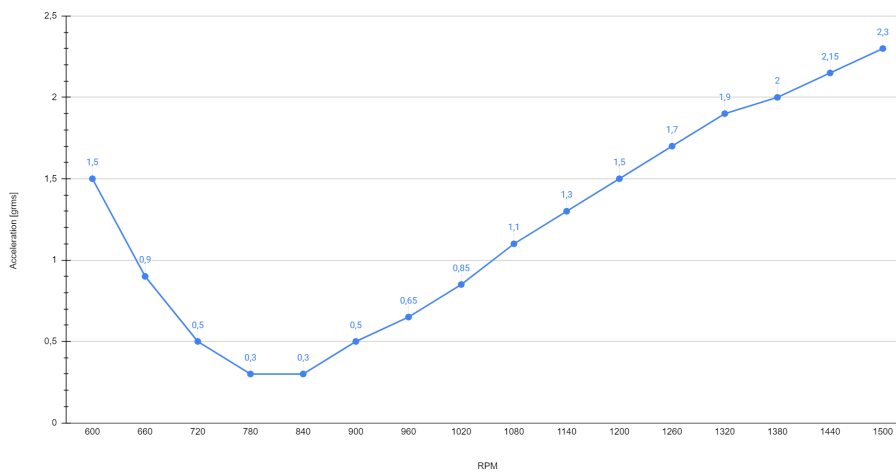
# SPECIFICATION

## Power supply:

Patented Electromagnetic generator.  
Working frequency span:  
10-22Hz (600-1320RPM) @  $\geq 1.5g_{RMS}$ .  
Nominal rechargeable energy storage 1.32 Wh.

## Vibration required for continuous operation:

Acceleration required for continuous operation  
*Body sensor configuration: Sampling rate 1kHz, duration: 3 seconds, interval: 5 minutes. Running 6h/day*



## Power consumption:

Sampling rate 1024Hz, duration: 3 seconds, interval: 5 minutes  
~8 mW

Sampling rate 8192Hz, duration: 5 seconds, interval: 5 minutes  
~10 mW

Stand-by  
<1 mW

Shelf mode  
~4 uW

## Enclosure material:

Bottom plate: Anodized aluminum alloy, "Orange".  
Casing: PA6, Black.

## Ingress protection:

IP67

**Typical weight w. pot magnets:**

750g.

**Dimensions: (excluding mounting accessories.)**

135x98x60 (height x width x depth)

**Dimensions: (w. pot magnets.)**

135x98x64 (height x width x depth)

**Operating Temperature:**

-40°C to +80°C

**Storage Temperature:**

0°C to +45°C (-40°F to +140°F)

**Relative humidity:**

0 to 95%, non-condensing

**Mounting interface:**

3x Pot magnets / Universal AMPS 4xM5 hole pattern, 30x38mm.

**Radio communication:**

Tx Power:

0 dBm

Rx Sensitivity:

-98 dBm

Data Rates:

Up to 1 Mbps

Frequency:

2.400 to 2.483 GHz

Antenna Gain:

typ. 6dBi

**Acceleration measurements:**

3 Axis MEMS accelerometer  
TDK InvenSense IIM-42352

Range  
 $\pm 16g$

Sampling rate  
Selectable: 256, 512, 1024, 2048, 4096, 8192, 16384.

Accelerometer measurement range  
XY-plane: dc to 4kHz ( $\pm 3$  dB point)  
Z-axis dc to 1.6kHz ( $\pm 3$  dB point)

**Temperature sensor measurement accuracy:**

Typ.  $\pm 0.5$  °C -40°C to 125°C  
Typ.  $\pm 0.25$ °C, 0°C to +65°C

**Edge data storage:**

Non persistent 64Mbit RAM.

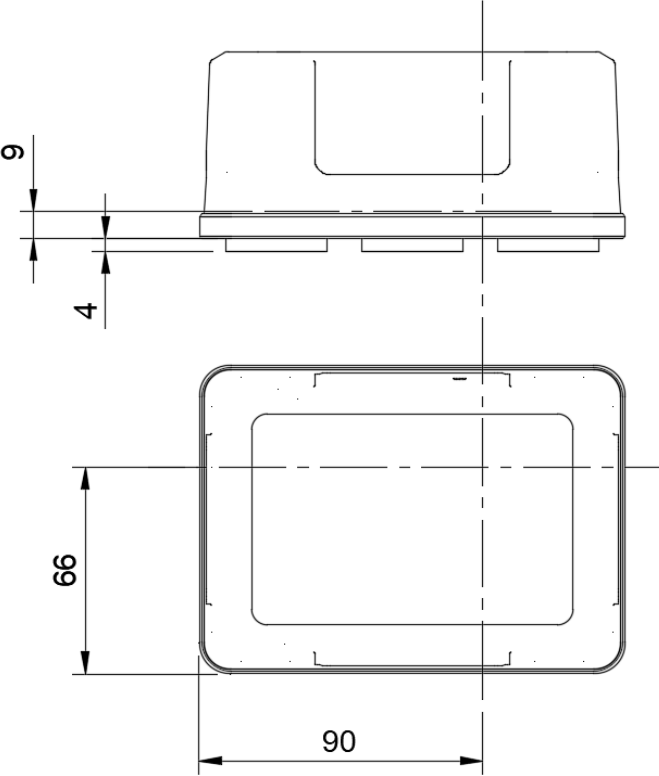
**Timesynchronization offset:**

Typ. <5 us

**Expected product lifetime:**

>5 years

# Accelerometer position



# CONTACT

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